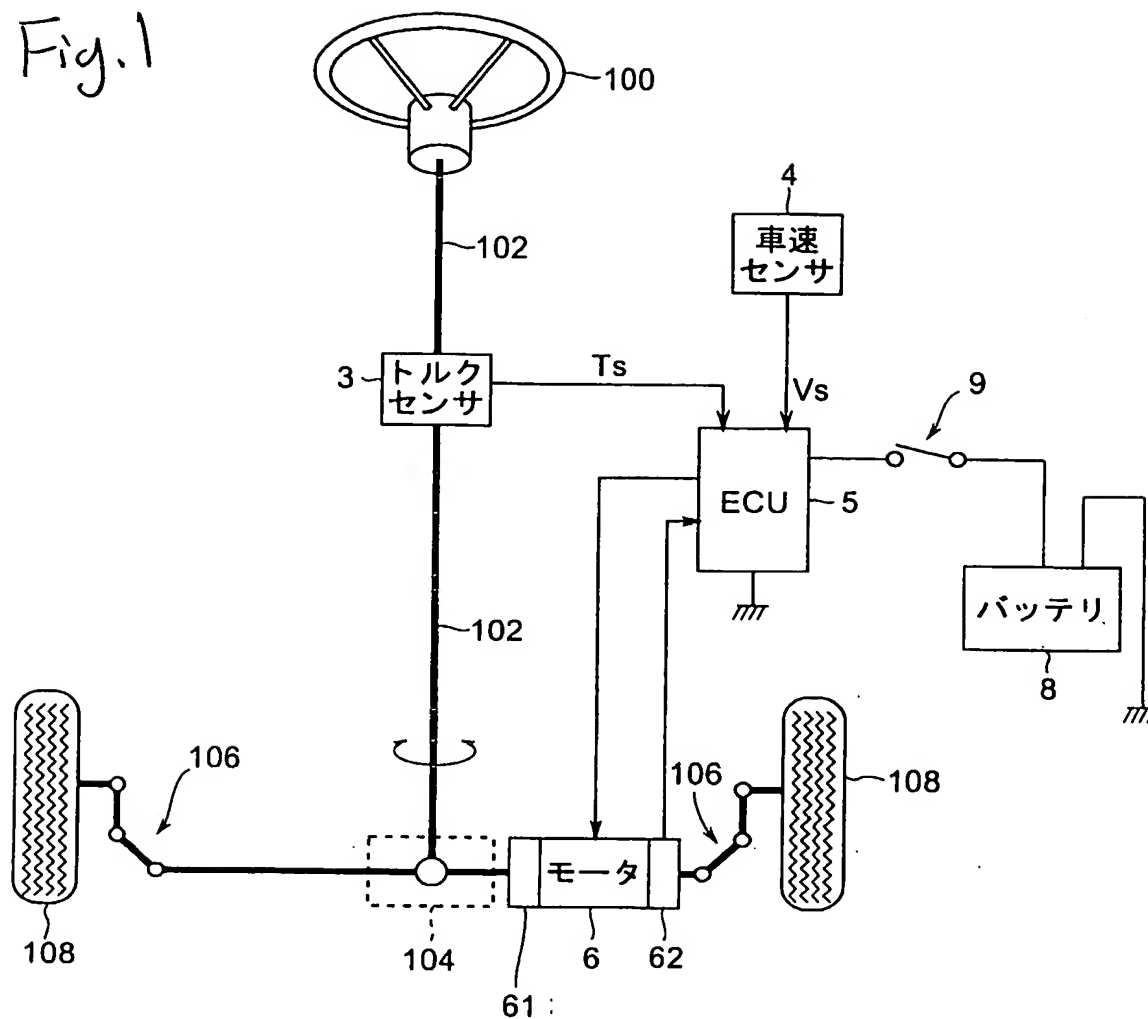


Fig. 1



3: TORQUE SENSOR

4: VEHICLE SPEED SENSOR

6: MOTOR

8: BATTERY

Fig.2

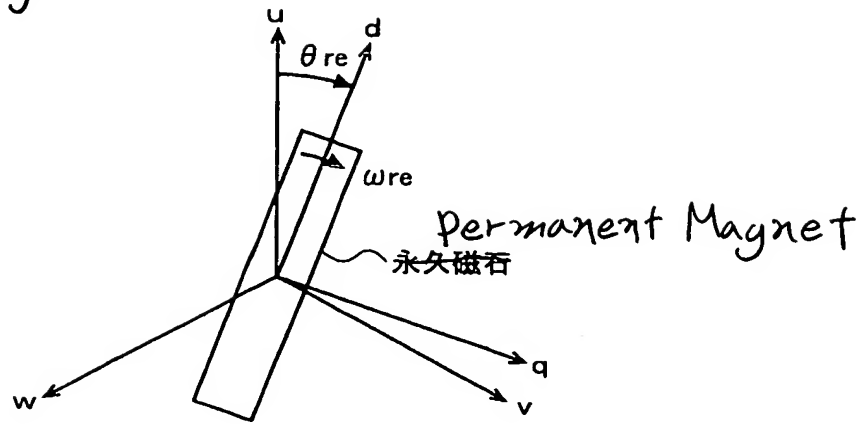
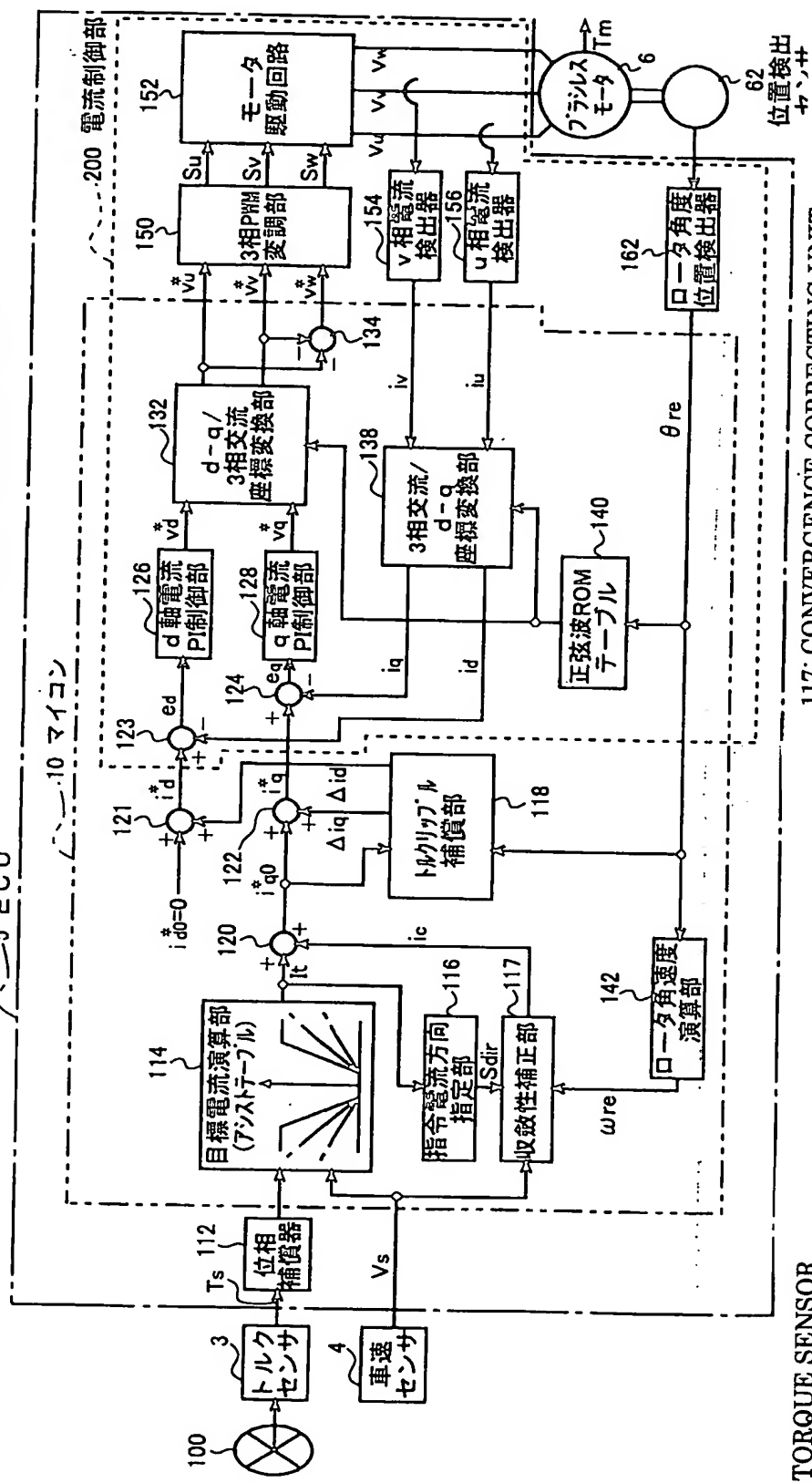


Fig. 3

- 152: MOTOR DRIVING CIRCUIT
- 154: V-PHASE CURRENT DETECTOR
- 156: U-PHASE CURRENT DETECTOR
- 162: ROTOR ANGLE POSITION DETECTOR
- 200: CURRENT CONTROL UNIT



- 3: TORQUE SENSOR
- 4: VEHICLE SPEED SENSOR
- 6: BRUSHLESS MOTOR
- 10: MICROCOMPUTER
- 62: POSITION DETECTING SENSOR
- 112: PHASE COMPENSATOR
- 114: TARGET CURRENT CALCULATING UNIT (ASSIST TABLE)
- 116: INSTRUCTION CURRENT DIRECTION SPECIFYING UNIT
- 117: CONVERGENCE CORRECTING UNIT
- 118: TORQUE RIPPLE COMPENSATING UNIT
- 126: d-AXIS CURRENT PI CONTROL UNIT
- 128: q-AXIS CURRENT PI CONTROL UNIT
- 132: d-q/3-PHASE AC COORDINATE SYSTEM CONVERTING UNIT
- 138: 3-PHASE AC/d-q COORDINATE SYSTEM CONVERTING UNIT
- 140: SINE ROM TABLE
- 142: ROTOR ANGULAR VELOCITY CALCULATING UNIT
- 150: 3-PHASE PWM MODULATING UNIT

Fig. 4

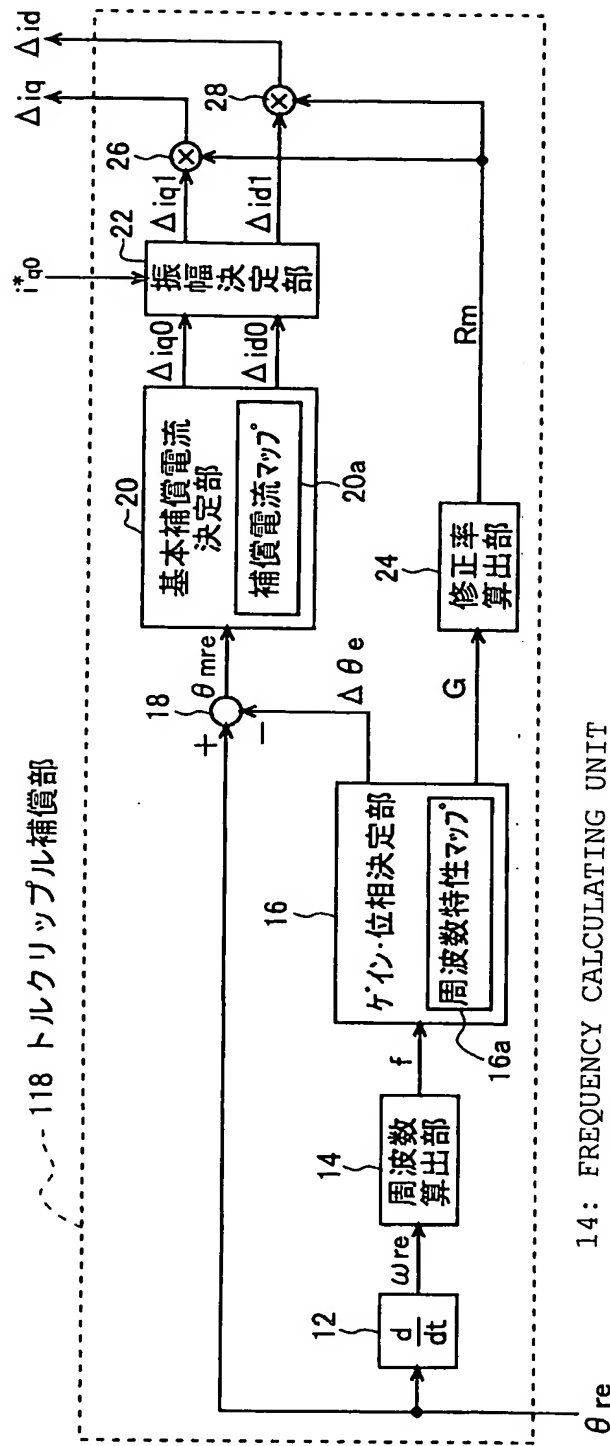
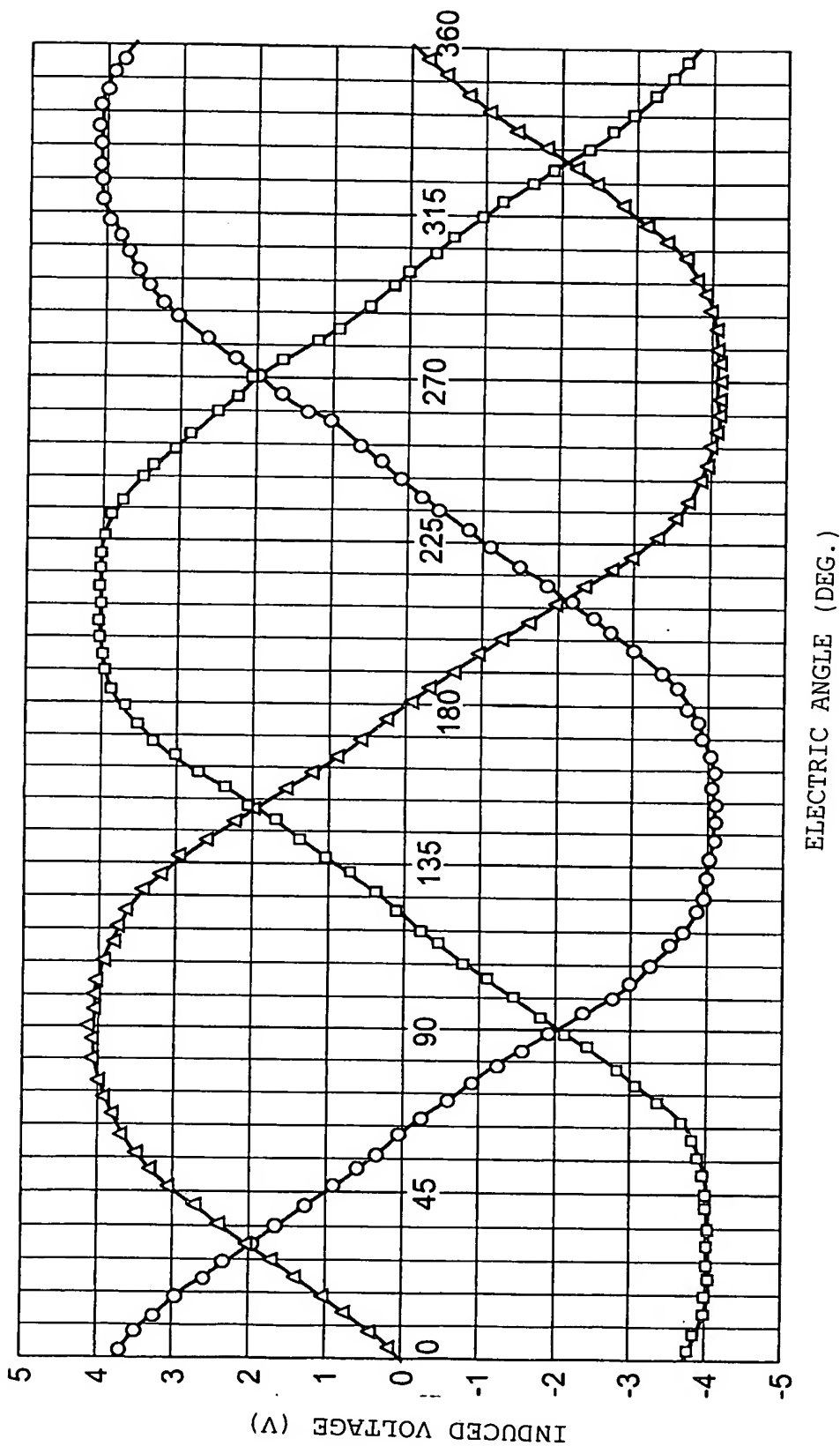


Fig. 5



- △ : U-PHASE INDUCED VOLTAGE
- : V-PHASE INDUCED VOLTAGE
- : W-PHASE INDUCED VOLTAGE

Fig. 6

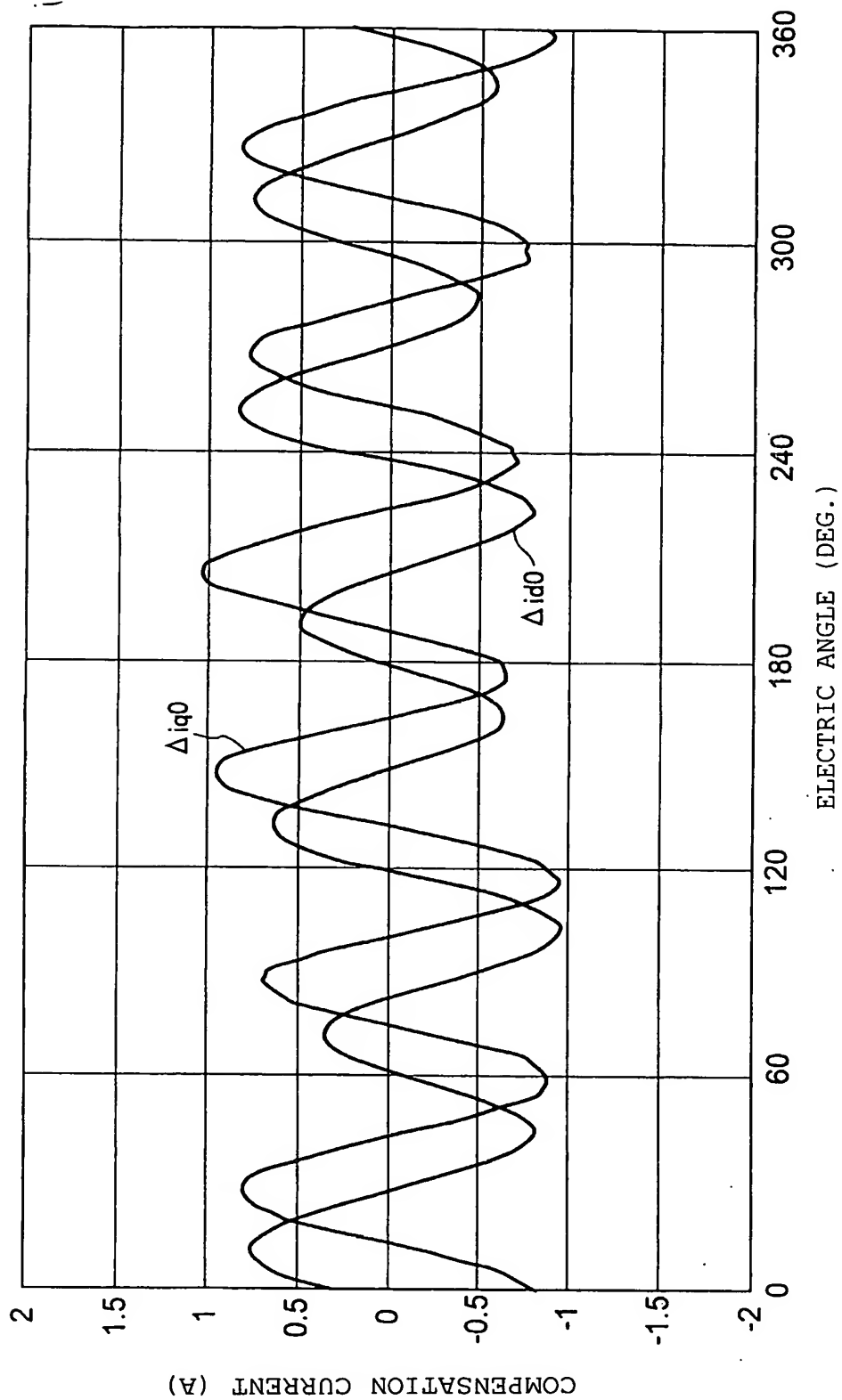


Fig. 7

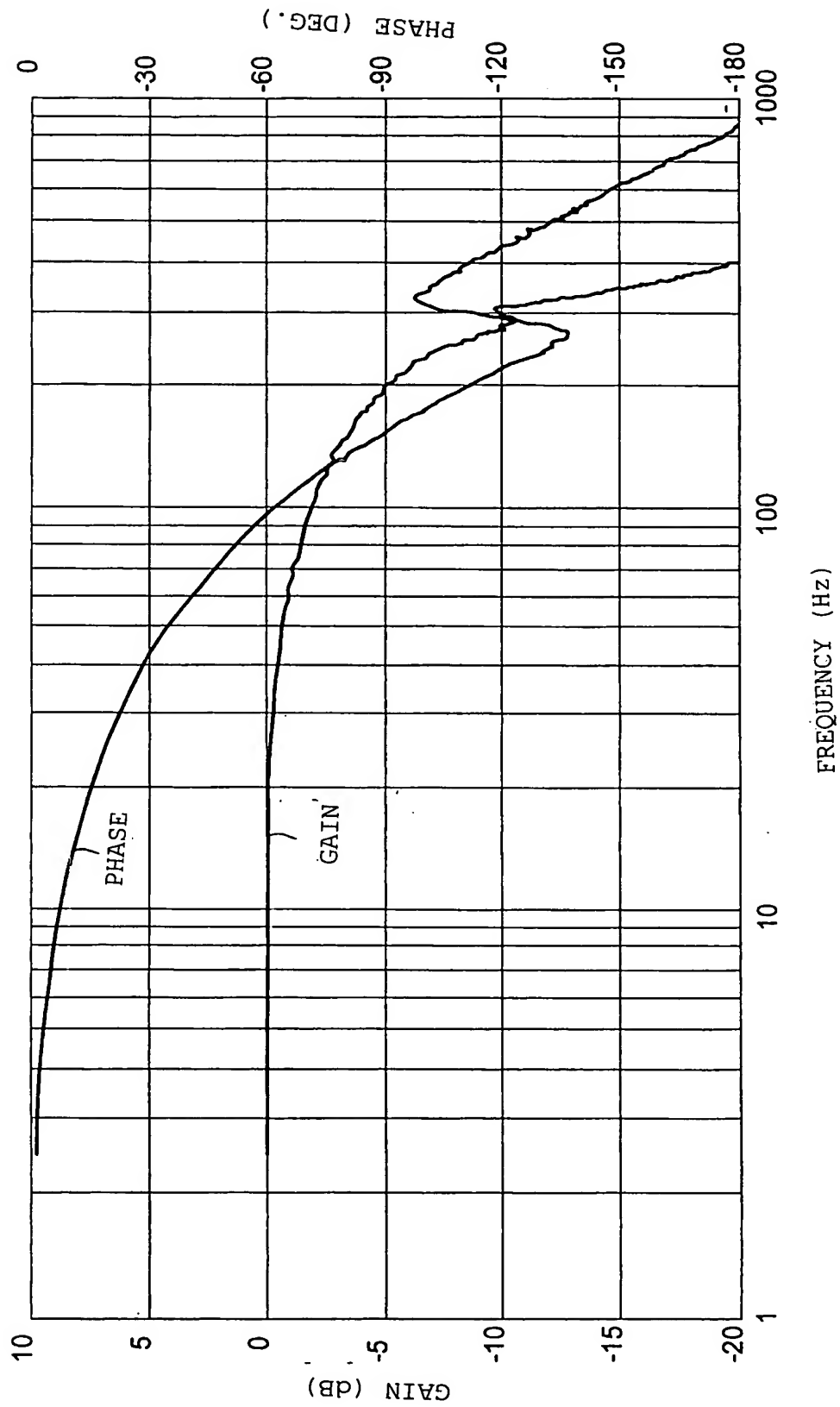
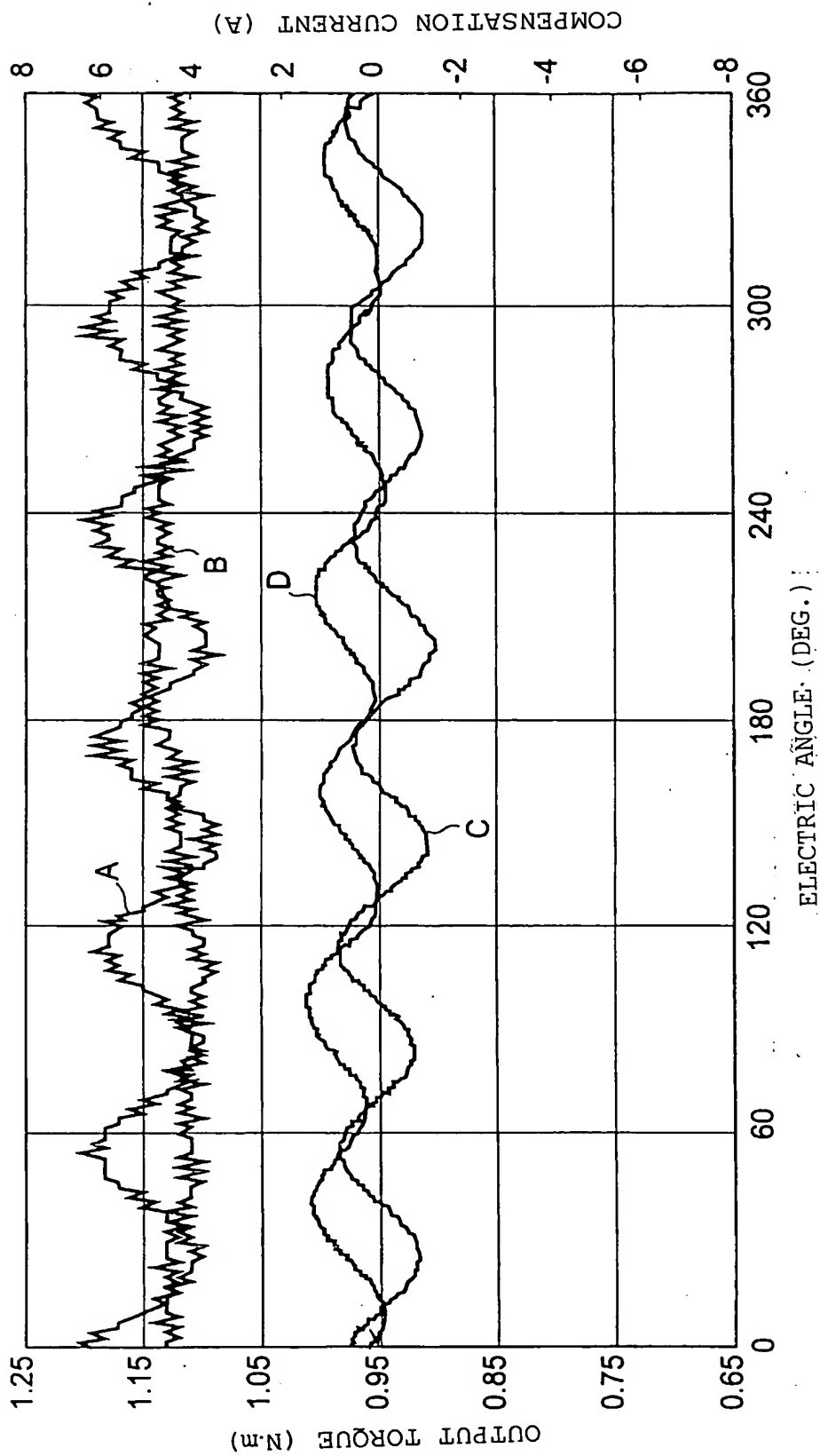


Fig.8



A: OUTPUT TORQUE (WITHOUT COMPENSATION; SET VALUE: +1 N.m)

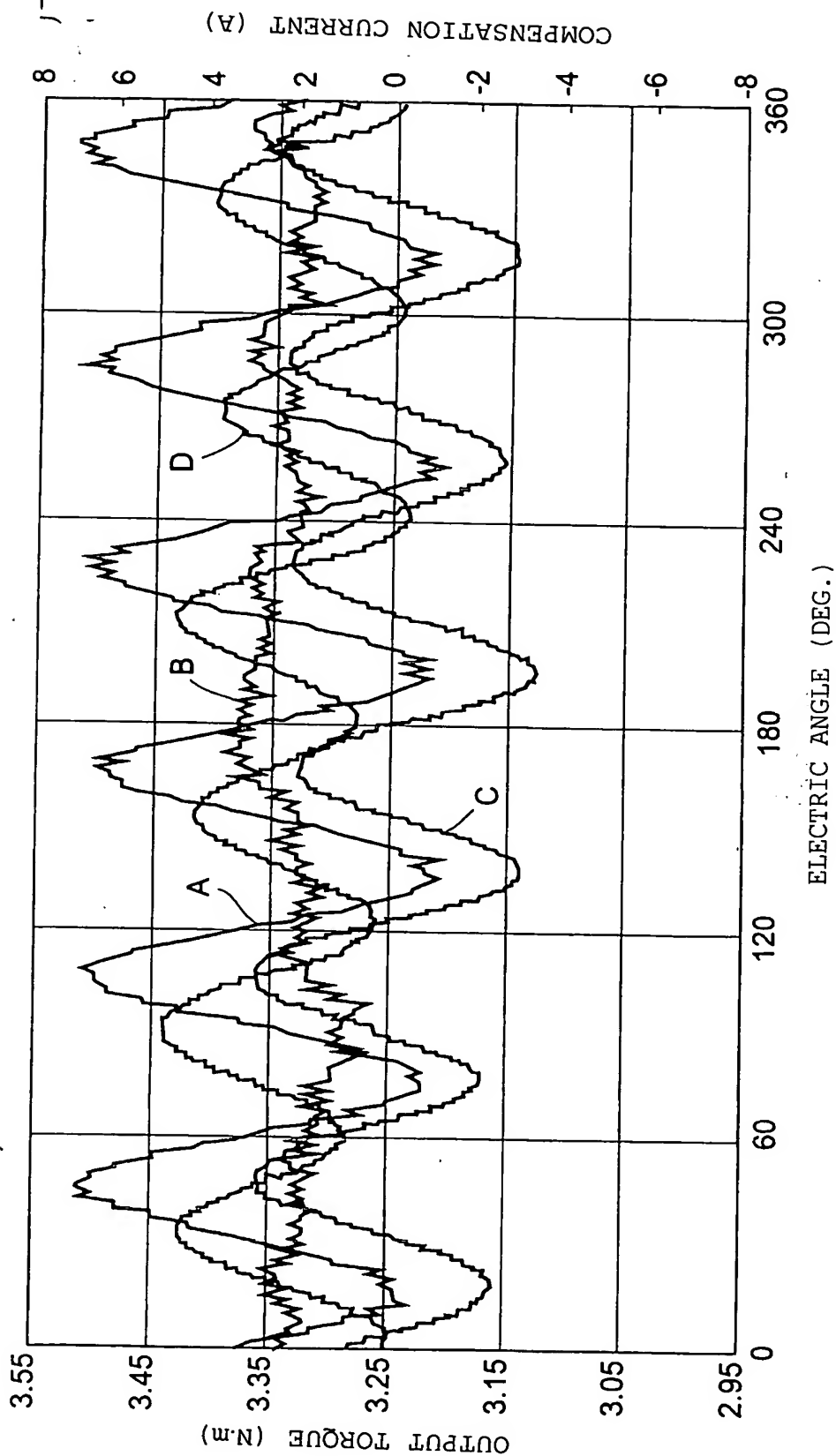
B: OUTPUT TORQUE (WITH COMPENSATION; SET VALUE: +1 N.m)

C: q-AXIS COMPENSATION CURRENT

D: d-AXIS COMPENSATION CURRENT



Fig. 9



- A OUTPUT TORQUE (WITHOUT COMPENSATION; SET VALUE: +3 N.m)
- B OUTPUT TORQUE (WITH COMPENSATION; SET VALUE: +3 N.m)
- C q-AXIS COMPENSATION CURRENT
- D d-AXIS COMPENSATION CURRENT